

Texas City Harbour, Texas, USA – 16 Apr 1947



On the morning of 16th April 1947, the French cargo ship S.S. Grandcamp sat moored in Texas City Harbour. It was loaded with small arms ammunition, bales of sisal binder twine, bales of cotton, bags of peanuts, refrigeration equipment, farm machinery and 2 million kg of bagged ammonium nitrate fertilizer.

At 0800 hrs, a longshoreman smelled smoke coming out of the hold. As they moved several bags of fertilizer they found flames between the cargo and the hull. They tried unsuccessfully to put the fire out with an extinguisher before some crew members called for a hose line to extinguish the fire. Unfortunately the ship's captain interfered because he did not want water to ruin his cargo, choosing to cover the cargo with a wet, heavy tarpaulin and activate the ship's steam smothering system in an attempt to suffocate the flames. He did not realise that the steam they introduced would combine with the decomposing fertilizer to create combustible gas.

Eventually, the gas blew off the hatch cover and thick columns of orange and brown smoke rushed into the air. The Captain gave the order to abandon ship and finally a call went to the Texas City Fire Department. The streams of water from the fire trucks did little to control the fire, as the water from the hoses vaporised as soon as it hit the deck of the burning ship. Alarms were not raised as advice from a nearby chemical plant was not to worry because ammonium nitrate could not explode without a detonator.

At 0912 hrs the ship exploded, killing all the fire fighters on the scene and most of the spectators, creating a 4 m wave that pushed a nearby barge 60 m inland onto some railroad tracks. The explosion was heard 250 km away.

The shockwave from the blast completely destroyed dockside warehouses and homes within 1.5 km of the dock, and the nearby chemical plant that had provided the advice. The collapsed buildings trapped people inside, and provided fuel which quickly spread the fire to the refineries that made up the Texas City industrial complex.

In the chaos, two other ships in the port, S.S. High Flyer and S.S. Wilson B. Keene, collided and caught fire. The High Flyer was also loaded with ammonium nitrate, and on the early morning of 17th April 1947 the High Flyer also exploded, taking the Wilson B. Keene with her. This blast generated shock waves that destroyed an adjacent concrete warehouse and grain elevator, and triggered even more fires.

This incident led to changes in the way ammonium nitrate fires are fought, the introduction of buffer zones between chemical plants and residential areas, and an increase in the quantity and quality of the medical facilities in Texas City. Most importantly, changes were made to the manner in which decisions were made to ensure they were based on safety rather than economics.

581 Fatalities

3000 Injuries

US\$100 Million Damages (1947)